

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number  
**WO 2005/063828 A1**

(51) International Patent Classification<sup>7</sup>: **C08F 10/00**,  
210/16, C07F 17/02, 7/08, C07D 495/04 // (C07D 495/04,  
333:00, 333:00)

(74) Agent: SACCO, Marco; Basell Poliolefine Italia S.p.A.,  
Intellectual Property, P.le G.Donagan 12, I-44100 Ferrara  
(IT).

(21) International Application Number:  
PCT/EP2004/012984

(22) International Filing Date:  
16 November 2004 (16.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
03104913.3 22 December 2003 (22.12.2003) EP  
60/532,331 22 December 2003 (22.12.2003) US

(71) Applicant (for all designated States except US): BASELL  
POLYOLEFINE GMBH [DE/DE]; Brühler Strasse 60,  
50389 Wesseling (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): NIFANT'EV, Ilya,  
E. [RU/RU]; 26 Bakinskih Komissarov, Str.12/3, apt. 60,  
Moscow, 117526 (RU). IVCHENKO, Pavel, V. [RU/RU];  
2nd Mosfilmovskiy per., 24, apt.5, Moscow, 119285 (RU).  
TAJDAKOV, Ilya, V. [RU/RU]; Marii Ulianovi Str. 9-2,  
apt. 8, Moscow, 119231 (RU). RESCONI, Luigi [IT/IT];  
Via Palestro, 101, I-44100 Ferrara (IT).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE,  
SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

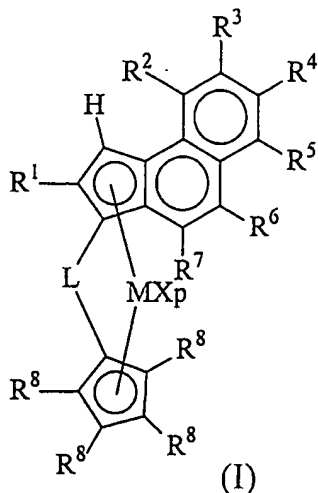
— of inventorship (Rule 4.17(iv)) for US only

**Published:**

— with international search report  
— before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

[Continued on next page]

(54) Title: METALLOCENE COMPOUNDS



(57) Abstract: A metallocene compound of formula (I) wherein: M is an atom  
of a transition metal; X, same or different, is a hydrogen atom, a halogen atom, or  
a R, OR, OSO<sub>2</sub>CF<sub>3</sub>, OCOR, SR, NR<sub>2</sub> or PR<sub>2</sub> group, wherein R is C<sub>1</sub>-C<sub>40</sub> hydro-  
carbon group; L is a divalent bridging group; R<sup>1</sup>, is a C<sub>1</sub>-C<sub>40</sub> hydrocarbon group;  
R<sup>3</sup> is a C<sub>1</sub>-C<sub>40</sub> hydrocarbon group; R<sup>2</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup>, equal to or different  
from each other, are hydrogen atoms or C<sub>1</sub>-C<sub>40</sub> hydrocarbon groups.



---

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*